

# THE FARMER & GARDENER.

PUBLISHED EVERY TUESDAY BY THE PROPRIETORS, E. P. ROBERTS AND SANDS & NEILSON—EDITED BY E. P. ROBERTS.

No. 42.

BALTIMORE, MD. FEBRUARY 14, 1887.

Vol. III

THIS publication is the successor of the late  
**AMERICAN FARMER.**

and is published at the office, at the N. E. corner of Market and Charles streets, at FIVE DOLLARS per annum, payable in advance. All subscribers who pay in advance, will be entitled to 50 cents worth of any kinds of seeds, which will be delivered, or sent, to their order.

**American Farmer Establishment.**

BALTIMORE: TUESDAY, FEB. 14, 1887.

The immense importance of the Beet culture may be very readily imagined from the fact, that 80,000,000 lbs. of sugar were manufactured from beets in France during the year 1885, which at 10 cents per lb. is equal to \$8,000,000. The benefits conferred upon the people of that country by this single article of agricultural product, are, indeed, of the first importance, in the degree of comfort and prosperity which it dispensed to the industrious and enterprising. We have introduced this fact at the present moment with a view of making a remark or two which appear to us to be called for by the occasion. Those who have visited France, and who enjoyed every facility for forming correct judgments, have stated, and we believe with truth, that both the soil and climate of the United States of America, are equally adapted to the culture of the beet as those of that country. Such being the fact, we would ask—Why should not American agriculturists adopt it as a branch of their systems of husbandry? It promises the best rewards for their industry and enterprise, and would contribute largely towards their individual wealth. For ourself we can see no possible objection to their entering into the business at once, and should they be unwilling at the onset to go extensively into it, each one might upon a small scale, make such an experiment as would test its practicability as well as profitability. By essaying first to manufacture a sufficient quantity for the domestic consumption of his family, each farmer or planter would derive an experience, at a trifling cost, that would prove ultimately invaluable; for he would thus acquire a practical knowledge of the process that would enable him at his pleasure to increase the business, to such extent as might be dictated by his interest.

But while we are upon this subject, we will ob-

serve, that as it may not suit but few agriculturists, except those owning large estates, to become, manufacturers of sugar, the true policy would be for every considerable city and town to form corporate companies with the object of buying the beets from those who may raise them, and manufacture them into Sugar. Such arrangements would furnish markets for this article, and thereby stimulate those engaged in agriculture to enter spiritedly into the beet culture, while the profits arising from its conversion into sugar would afford a handsome remuneration for the capital employed.

Mr. Pedder assumes as the average crop of an acre of ground, 23,000 pounds, and he gives the following as the result of extraction:

Sugar, 1st and 2d quality,	2,400 lbs.
Molasses, 2 per cent.	800
Cakes, 15 per cent.	6,000
	9,200 lbs. <i>pr. ac.</i>

The residuum after the sugar and molasses are expressed makes an invaluable food for stock, or may be converted into pot-ash, and would in either case more than pay for all expenses attendant upon manufacturing. Indeed, Mr. Isnard affirms that while prosecuting the business in France, he sold his *cake* for feeding cows, higher per cwt. than the price of beets, it being considered more nutritious than the entire root, the aqueous particles being in a great measure separated from the mass in the process of preparation.

## THE CULTIVATION OF SILK.

The cultivation of silk in this country, is becoming an object of great and just importance, and will ere long be one of the most prolific sources of profit to the agriculturist. In New Jersey it is progressing with such rapid strides, that a quantity of silk will be made the present season, and we are pleased to perceive that our brother of the "Bridgeton Whig" has now 700 trees of three years growth, which are estimated to feed 150,000,000 of worms.—*Germantown Telegraph, 8th Feb.*

From the number of trees of the various kinds of Mulberry planted in our country, it might well be said that we were making "rapid strides" in the culture of silk, if 700 trees, of 3 years growth, would feed one hundred and fifty

millions of worms. There is an evident error in the above statement, and lest some persons may be deceived, we shall take upon ourself the office of correcting it.

From the best lights we have been able to get upon the subject—and we have made it our business to inform ourself—20,000 worms will consume during the feeding season, 1000 lbs. of leaves. A full grown Mulberry tree, (say at 20 years old,) it is estimated will sustain 5,000 worms during that period. If then the trees of the editor of the *Bridgeton Whig*, were of that kind, they would feed but 2,500,000 worms; but as they are but 3 years old we incline to the opinion that they will not feed more than one-twelfth of that number.

No one thinks higher than we do of the lucrativeness of the Mulberry and Silk culture; but we are averse to giving credence to any statement so far above reality as this. Now 700 trees, at 25 feet apart, might be put on a fraction over 10 acres of land, and if they were competent to feed 150,000,000 worms, as 3,000, on a fair average, will yield a pound of silk, the whole number would give us 50,000 lbs.; which at \$5 per pound, would make the gross sum of \$250,000, for a little over ten acres, or nearly \$2,500 per acre. The paragraph whence the above was taken, has doubtless been written in haste, and its inaccuracy escaped detection by the proof reader; but as there is no necessity for the aid of over sanguine calculations to advance the silk culture, we have deemed it our duty to point out the improbability of the statement alluded to, and we would feel obliged to those editors who may have incautiously noticed the *Bridgeton* article, to make the proper correction.

**Foreign Wheat.**—We learn from the *American* of Saturday last, that there has been imported into the port of Baltimore, since September last, three hundred and sixty-one thousand, six hundred and ten bushels of foreign wheat, including fourteen thousand bushels received coastwise.

In New York on Sunday the 5th inst. there arrived from Marseilles, 6000 bushels of wheat; from Bremen 160 last of do; and from Trieste 11,000 bushels of rye.

## OBSERVATIONS

## Relating to the Transplanting and Culture of Fruit Trees.

**PEACHES.**—Peach trees grow and succeed pretty well, on almost any dry soil, but that which they appear to thrive the best in, is a rich sandy loam. Sandy land matures the fruit much earlier than clay, and renders it of better flavor, and the trees live longer on rolling or wavy land than on such as are flat or low; a northern exposure is best, especially if protected from the rays of the sun by lofty woods on the south, whereby the bloom will be retarded, and consequently less exposed to late frosts.

Twenty feet is a good distance to plant the trees apart, and cultivate them, as recommended for the apple; be particular to wash the trees as recommended for the apple and other trees, by which means the bark will be kept in a healthy sound state, preventing deep cracks, to which this tree is subject; into which cracks the insect deposits its eggs, as well as near the root. The time has been, that the peach was of very easy culture, but owing to the worm and other diseases, of later years it has become much more difficult, and hence the necessity of more skill, and regular attention;—and being one of the most delicious fruits, originally from the Persian empire, they will richly pay for the extra care, at four dollars per bushel, the Baltimore price for best sorts and well raised fruit.

To raise a good peach orchard and preserve it from the worm: procure trees one year old from the bud, older trees are more affected by the worm, and are much more checked in their growth, by transplanting, than when removed young. I do not mention this to promote the sale of young trees, but it is my candid opinion, and it is the custom of the Jersey farmers who supply Philadelphia with peaches; and it is best to get trees that have been budded on seedlings, the seed of which had been procured from thrifty trees, which had never been budded, and of course native or hog peaches—and before planting those trees, carefully examine the roots for the worm, which will mostly at this age be small, and may be found a little under the bark, a few inches below where the top of the ground was, and if taken out now the tree is up, the worm may be kept up as follows, supposing the trees to have been planted as directed for the apple:

About the middle of May, take the earth away from the trees about two inches deep, and wrap the trees one inch thick and three feet up the bodies with rye straw, placing the lower ends in said trench, and haul up the dirt on the lower end of the straw, which will keep the miller from laying its eggs on the tender bark of the tree during the time of its flight; after the first of October, the straw ought to be removed to harden the wood before winter, and place around each tree about one shovel-full of ashes; this should be done every fall, and increase them in proportion to the rise of the trees, and repeat the bandages of straw annually, as above, until the bark of the trees become old and so hard as to render it impervious to the worm. In order to obtain large fair fruit, they require judicious trimming—the first season after planting, as soon as the buds have fairly broke or pushed out, head the trees

down to about three to four feet high, taking care to do it above the bud; and after the branches have shot out, select three of the best of them near the top, and rub all the rest off—these three will mostly make strong shoots the first season, and the next season shorten these branches about one-fourth of their length, and rub off all the buds but three on each near the end, as in the first case; this will give the tree nine branches, which will mostly give a handsome head to each tree, and annually thereafter cut out about two-thirds of the fruit bearing species, leaving the strongest and best about equally distributed, and the leading shoots must be occasionally shortened as they become slender or weak, which strengthens the bearing wood, and the thinning out the spurs will lessen the necessity of thinning the fruit in some measure. Yet to have first rate fruit they ought to be thinned to four inches, leaving only one peach in that space, which ought to be done before the fruit is as large as the seed or stone of it; in this way we can have the same weight of fruit as if all was left on, and of course very large, and proportionally juicy and luscious.

**CHERRY TREES.**—Cherry trees grow best on a rich well cultivated loam, on an open clay sub-soil, low, alluvial, sandy or wet land, is unfavorable.

The assortment of this fruit are much improved within a few years in this country; by another season I shall have some very superior new sorts—having seen the fruit of some of them, enables me to speak with confidence.

ROBT. SINCLAIR.

We have pleasure in expressing our entire concurrence in the tribute of praise contained in the following notice, which we copy from the N. York American.—*Nat. Intell.*

**NILES' WEEKLY REGISTER.**—It may seem somewhat like supererogation to say aught at this time of day in praise of a periodical so well known as the *Weekly Register*; but having at the moment experienced its value, we may as well acknowledge it. The last number happening to be before us, when we were desirous of looking back at two or three public documents, to find which in the file of a daily paper would have required both time and research—we turned to it, and there lighted on them ready to our hand: they were the Report of the Committee of Ways and Means of the House of Representatives, and Mr. Webster's Protest in the Senate.

The same number also contains the letter of Santa Anna to the President, Mr. Gallatin's letter to Mr. Madison on the repeal of the restraining law, the preamble, &c. of the Expunging resolution, a greater part of the debate in the Senate on the admission of Michigan, besides current news, incidents, &c. The Register is now conducted by a son of the original editor and proprietor, with undiminished care and intelligence; its form is changed from 8vo. to 4to. and of course its capacity for matter is enlarged in proportion.

A little sweet oil with nutmeg grated over it, given twice a day to children with the whooping cough, is said to be a sovereign remedy if administered in the first stages of the complaint. It can do no harm and possibly good.

## BEET CULTURE.

Extracts from De Fontenelle's Manual.

[Continued.]

## Hoeing.

The cares which the beet requires during its vegetation are very numerous. There come up at the same time with it a host of weeds, which impedes its growth, and in the end will choke it, if they are not carefully rooted out. That is the end we propose in hoeing. In the cultivation of beets, the hoeing must be repeated three times; the first is to be done at the time of transplanting; the second and the third at about one month's interval. When the beets have been sown broadcast, the weeds are to be rooted out with the hand, or with a pick. A man roots out with a pick all the weeds, which are then carried away and laid in a heap, to be converted into manure.

The sowing in drills gives the facility of doing the first and even the second hoeing with the horse-hoe, which is the most expeditious.—It is true the workmen must afterward pass over it, to till about the roots, and to pull up the weeds which the machine has left.

Besides the advantage that hoeing gives in clearing the ground of weeds that impede the vegetation of the beets, it has that also of turning up the earth, and giving light upon it. Thus we see, after each hoeing, the plant assumes a new vigor. The product of a field that has been well hoed is at least double that where the hoeings have been neglected.

Some cultivators have proposed to hill the beet. This method is more hurtful than useful. The roots do better when their upper part enjoys the direct action of the air, and of the rays of the sun. Thus, in Germany they often plant them mixed with a species of potatoes which it is necessary to hill; the earth taken from the beets is put about the roots of the potatoes.

We must guard against plucking the leaves of the beets designed for the manufacture of sugar, during their vegetation. It is an error to suppose that by plucking the leaves of which it has been deprived, except to the injury of the substances which serve to increase its volume, and among these substances is the sugary matter, which is most developed.

## Harvesting.

As the beet approaches maturity, its leaves, which have been up to this time hard, erect, and of a handsome green tint, become marked with reddish spots, flag down upon the ground, and grow yellow. These marks, which appear toward the month of October, announce that the beets have come to their full growth, and that they have nothing more to attain. We must then proceed to pluck them. We must choose fine weather, after some days without rain, for it has been observed that the quantity of sugar which the beets furnish, varies much with atmospheric circumstances. Thus the sugar from the beets, plucked after some days of rain, is always more watery than that from beets gathered in a dry time. The beet must not, however, be suffered to remain long after its maturity; for from this time the saccharine element, by a new elaboration of the juices, goes on daily diminishing,



and finally disappears altogether. M. Chaptal relates an instance of this, too remarkable not to be mentioned here.

M. Darracq, in concert with M. Lecomte d'Angosse, prefect of the department of Landes, had every thing prepared to establish a sugar factory. From the month of July to the end of August, he made experiments with the beets in all the eight ways, and constantly extracted two and a half to four per cent. of good sugar from them. Assured by these results, he discontinued his experiments, to give himself up to the cares which his establishment required. What was his surprise, when, toward the end of October, the beets would furnish him nothing but sirup and saltpetre, and not one atom of crystallizable sugar.

Another inconvenience presents itself: if they are gathered before maturity, they wither, become soft—the extraction of the juice is a more difficult operation, and the sugar has less consistence. However, if the sugar is extracted immediately after they are taken from the ground, it appears that it may be done a little before their maturity without any bad result. So, at least, M. Mathieu de Dombasle assures us, who says, that he had extracted as much sugar, and even as it appeared to him, more, from beets of the same ground plucked in June, than from those gathered in the month of October. It is commonly women and children who do the business of gathering them. For this purpose they are divided into couples of two women, or of one woman and one child. The first with a spade takes up the beet, and leaves it on the soil: the child who accompanies her takes a root in each hand, and shakes them, beating one against the other, to detach the earth that is adhering to them; after which he ranges them one by the side of another in a line, the necks on one side. A laborer with a sharp spade passes over the lines, cutting off the necks. This is done by striking down the spade vertically, as if to fix it in the ground. This operation requires in the laborer who is charged with it a certain degree of adroitness, to cut off the neck without injuring the body of the beet. The principal object in cutting off the necks of the beet is to arrest the vegetation, which, without this operation, will continue many days to the injury of the sugary matter.

When the weather is favorable, the beets, after being pulled up and beheaded, are left some days spread on the ground, in order that the air may take from them a part of the water they contain. When it is supposed this drying is effected, they are put in heaps, and carried on carts to the magazines where they are to be kept.

We have already said that the leaves and the necks should remain on the ground, and that they may be considered a good demi-dressing for the harvest of the following year, which is commonly grain. Sometimes they fodder on the spot with these leaves, which are very abundant, the oxen, cows, sheep and pigs.

It is computed that sixty workmen, women and children, may pluck up, behead and put in heaps, the roots from a hectare and a half of ground in a day.

#### Preservation of the Beets.

The manufacture of the sugar of beets being prolonged through part of the winter, one of the most important cares is to provide for the keeping of this root, and preserving it from the different influences which might alter its composition and diminish the sugary matter, that it contains at the moment of harvesting.

These causes of alteration may be reduced, first to the influence exerted on all organized matter by a secret power, according to which they perform all their functions, the action of which continues even after the vegetable has been separated from the soil, and to which the name *vital power* has been given. Second, to temperature and humidity.

All plants retain then, as we have said, a remainder of life which continues longer or shorter, and with more or less force to elaborate the elements of which they are composed. Different circumstances may suspend, destroy or favor this action. A temperature below zero has the first effect, and in that circumstance beets may be preserved almost indefinitely. When subjected in this state to the operation of extracting the sugar, it furnishes a quantity equal to what it would have given before being frozen, only the work of rasping becomes more laborious. But it is altogether different if the operation is attempted in time of a thaw. The beets are then soft, wrinkled, and go on rapidly in the process of putrefaction. The mean time for the congelation of beets seems to be between the third and fourth degree below zero by the thermometer of Reaumur. But this degree may vary according to the quantity of water they contain; the least watery being sometimes able to support from one to two degrees below that above indicated.

A temperature a little raised destroys the vital power of the beet; but in a root completely dried, the proportion of crystallizable sugar that may be extracted will be considerably diminished, either by a change which may be caused by a too rapid drying or by the difficulty of working it.

However, Mr. Nosarzewski advises to preserve the beets by drying, and afterward extract the sugar by the aid of water or alcohol. His opinion is not founded on any positive experiment. Admitting, however, that it was based on facts, this method will be too expensive to be adopted in the manufactories.

The action of the vital power is singularly favored by a mean temperature of twelve or fifteen degrees; especially if accompanied with moisture. It is always at the expense of the saccharine element that this action is effected.—Beets placed in such circumstances are changed very quickly. A fermentation takes place, at first acid, but which before long becomes putrid.—Their interior then presents a number of cells, very apparent, filled with a viscous, stringy liquid. Their pulp is black, soft, and their surface is covered with mould.

Now in beets collected in a large quantity, without the air having a chance of being renewed, the vital power is sufficient to develop a heat capable of producing these different effects. It has even often happened that fermentation progresses with so much violence, that it is exhaled from the mass in abundant vapors. M. Dubrun-

faud relates, on the testimony of several manufacturers, that beets which at one time would not give any sugar, being left to themselves for some time, have afterward furnished some very fine.—The writer above mentioned, although finding it was very singular, did not seem to think it impossible—and we are of his opinion. He supposed, in order to explain it, that there was an elaboration of the juices of the plant, which at the first time had not taken place, and which was afterward effected.

The means at first used to preserve beets, that which naturally presented itself, was to put them in heaps in the yard of the factory or in the neighboring enclosures, or sometimes even on the field where they had been gathered. These heaps were made in the form of an oblong square of ten or twelve feet high. The top, disposed to a sharp ridge, was covered with straw to shed the rain. This mode of keeping, otherwise very economical, had the inconvenience of not protecting the beets from frost, from which it is especially necessary to guard them—nor from the varieties of temperature, the effect of which as has been above mentioned, is always very hurtful.

In many establishments they have attempted to preserve the beets by burying them. For this purpose they dig in the field, or in a ground near the factory, ditches three or four feet deep, and of various breadth. The roots are thrown at random in these ditches, the middle is raised to a sharp ridge, and the whole is covered with a bed of earth, a foot thick, at least.

In cases where the earth is very moist, M. Dubrunfaud advises not to make the ditches designed to receive the beets more than twelve or fifteen inches deep; to make two similar parallel ditches, and to dig between them a deep trench of two or three feet, for the rains to flow in. The earth taken from this trench will serve to cover the heaps of beets, which will then be raised about two feet above the soil. This is the method in use in Germany to preserve potatoes. M. Mathieu de Dombasle has practised it with advantage for preserving the beet. M. Chaptal recommends to line the bottom and sides with straw. It is now well established that this is more hurtful than useful. For the straw decays, and draws after it the decay of the roots.

In this mode of preservation, which otherwise offers great advantages, the chief difficulty against which we have to guard is to prevent the action of moisture of the beets.

Of all methods of preserving beets, the best undoubtedly, because it is calculated to guard them from extrinsic dangers, is to store them in cellars, or, better still, in magazines. The beets are piled in heaps of twelve to fifteen feet or more. By making them higher, the lower tiers which support the weight of the whole mass will be infallibly crushed. A passage must be left through the length of the store-room, in order to be able to examine them from time to time, and to remove from the heap any portions in which any decay appears.

To prevent the heating which may result from the heaping up of the beets, it is necessary to change often the air of the store-room. For this we must take advantage of a day when the wea-

that is dry and fine. The preservation of the beets is a store unites all the advantages that are desired. It has only the disadvantage of being expensive by the necessary size of the building.

The medium weight of a cubic metre of beets is about 800 kilograms. It will be easy from this given quantity to calculate the dimensions of a store designed to receive any certain quantity of beets.

We will add that it will be for the advantage of manufacturers to work, through the season, as many beets as they can. For Hermbstaedt has ascertained that they generally give more and better sugar at the beginning of the season than at the close. This is also the opinion of Wagmann.

#### *Mode of determining the Saccharine Richness of Beets.*

The process proposed by M. Pelouze for estimating the quantity of sugar contained in the different species of beets, consists in making them ferment in a place sheltered from the air, and then distilling the spirituous liquor that results from it. By the quantity of alcohol produced he estimates the proportion of sugar which was in the roots.

He first ascertained that thirty-five grammes of pure sugar perfectly dry dissolved in 445 grammes of water, to which had been added a little yeast or beer well watered, had given by distillation a spirituous liquor representing 20.5 of pure alcohol.

Starting from these premises, M. Pelouze extracted the juice of 500 grammes of beets, the pulp reduced very fine; and in order to extract all the sugary part exhausted it by repeated washings and compressions. This liquor mixed with a small quantity of pure yeast, is left to itself, in a temperature of about 188 or 208, and at the end of about 15 days the action is finished. He distilled then the fermented liquid, and ascertained its degree by the hydrometer of M. Gay Lussac.

To know the quantity of sugar in the 500 grammes of beets he had only to compare the quantity of alcohol obtained, with that furnished by the pure sugar.

Repeated experiments proved to M. Pelouze that generally beets contained a proportion of sugar double that which was separated by the processes used in the manufactories, that is to say, about 10 per cent.

According to this author, beets the most rich in sugar are those having a rose-colored skin and white pulp. The small are always more sugary than the large; which was known before the experiments of M. Pelouze.

The process of M. Pelouze is certainly accurate for the estimation of the quantity of sugar, and to clear up a mass of questions of great interest concerning the culture of the beet. But will it be practicable on all occasions? We think that an experiment that demands from twelve to fifteen days to be tried, and which requires some care to be done well, is not susceptible of being put in practice in all the factories where beets are worked to obtain sugar.

A correspondent in Professor Silliman's Journal states that Gypsum (sulphate of lime) is found in large quantities on the Muskingum, Ohio, of such beautiful crystalline structure and whiteness that it might be used for alabaster ornaments.

#### ON POTATOES.

The potatoe will grow upon almost any kind of soil, provided it be not too wet and clayey—but light, dry, and friable loams, or sands of tolerable consistence, are the most appropriate. Reclaimed bogs and pent land, when well drained, produce large crops; and some of the finest qualities are grown on alluvial soils, and in the warped land in the neighborhood of the Humber. Grubbed wood-land is also favorable to its growth, and the planting of potatoe will probably be found the most profitable mode of bringing it into immediate cultivation; indeed, as much as 500 bushels per acre have been thus obtained, but the land was manured with twenty wagon-loads of dung. A sward, or first ley, is, however, the most desirable; and it is for this purpose the common mode of breaking up grass land in Ireland, where it is frequently let to the peasantry at extravagant rents, in what are there termed "Con-acres," and yields crops of superior quality. The climate, indeed, is there more genial to the growth of esculents, than that of England, and the soil is generally so much richer, that in no other country has culture of the potatoe been carried to such perfection.

The produce of four eyes cut from the cluster species, and planted in four different kinds of soil was—

On a strong rich loam, . . . . .	34 lbs.
— light rich loam, . . . . .	29 lbs.
— a good gravel, . . . . .	19 lbs.
— sandy soil, . . . . .	15 lbs.

But, although some may be thus formed, of the produce, yet no definitive conclusion can be drawn from this experiment, regarding the crops to be obtained from the land, for other sorts might have been better adapted to the soils; they must be all heavily manured, and good sands are especially favorable to the growth of the larger roots.

#### CULTURE.

In Yorkshire, and other parts of the north, the ground is ploughed into one-bout ridges, and the "sets," or cuttings from the potatoe to be planted, are placed in heaps or baskets, and laid by women and children in the furrows; the manure is laid at the same time, and the ridge is covered with earth by the plough dividing it, and making a fresh one over the potatoe. As soon as the plants make their appearance above ground, the ridges are harrowed down, and are suffered to remain in that state about a week, when the weeds will begin to appear; the ridges are then earthed up, and in a week or two as much of the earth from the sides of them is ploughed down as can be done without leaving the roots too bare. After this the tops of the ridges are carefully hand-hoed, and the earth which was ploughed from the ridges is again turned to them: if afterwards weeds grow up, they are again hand-hoed, after which the earth is drawn up to the top of the ridges. The plants having by this time got to a considerable size, soon overcome all weeds, and consequently require no further attention till the time of taking up. It has, however, been justly observed, that "on all very dry sands, and in a dry climate, the land should be laid quite flat, and the plants should be hoed by hand, as the only means of preserving the ground sufficiently moist

to promote the growth of the crop; but in every situation where there is no danger of the land being too dry, and on all thin soils, one-bout ridges have the advantage over every other method."

Another mode—which it seems has been borrowed from America—is to plant the sets in banks. "The field is marked out in shallow drills, at about two feet and a half distance, by the double mould-board plough, and is then marked out transversely at the same distance; thus intersecting the surface at right angles, and the dung is laid at the time of planting. The holes for the reception of the sets are formed by a laborer at the intersection marked by the plough, in such a manner as to leave them flat at the bottom, about ten or twelve inches in diameter, and three or four inches deep. This being done, the manure is divided into the holes as evenly as possible, taking care that the particles be well separated by women and children breaking it with their hands. Four cuts are then to be laid in each hole, within four inches of the edge, and about six or seven inches distance, and covered by levelling the soil into the holes with shovels, which finishes the work until the plants appear above ground; after which, only a small quantity of earth is thrown lightly on the banks just sufficient to refresh the surface, and if the land be foul with weeds, it should be hand-hoed before the banks are dressed. The last earthing should not be performed until the crop is in full blossom, when it must get another light dressing.

Mr. Burroughs, from whom we have extracted the above account, says, that "many who have heard of this culture, at who have not practised it, imagine that its chief object is to afford a great quantity of earth being thrown up to the plants; but so far from this being the scientific principle of the system, that should the sets be deposited too deep, or the banks be landed too high, the crop would prove very unproductive." He adds also, from his own experience, that "the banks being left quite flat at the top when finished, the crop proved much more productive than the adjoining drills sown with an equal quantity of manure, and the potatoe were of better quality."

Regarding the mode of spreading the dung—whether above or under the sets—some difference of opinion prevails; for although the latter is the method usually adopted, and it may be rationally supposed, that, as the roots shoot rather laterally than upwards, it is from the manure placed underneath that they extract their nutriment, yet it is supposed by many persons that, if the land be light and dry, it answers better to lay the manure in furrows above the plants; and some farmers seem to think the manner of its application immaterial. According to an experiment made with the utmost degree of attention, under the direction of the Board of Agriculture, the former, however, appeared to have the advantage of five to four in its favor: the produce of an equal weight of sets, and quantity of manure, being—

When laid over the dung, . . . . .	105 lbs. 4 oz.
— under the dung, . . . . .	84 lbs. 3 oz.

Such are the ordinary modes of culture usually adopted throughout most parts of the United Kingdom; but a novel plan, which deviates in



some essential particulars from those generally employed, has lately been brought into notice by Mr. Knight, the very intelligent President of the Horticultural Society; and, as the very interesting account which has been published by the society may yet be unknown to many of our readers, we here transcribe it, and beg earnestly to call it to the serious attention of every farmer who is engaged in that branch of husbandry.

"The experiments were made upon different varieties of potatoes: but as the results were in all cases nearly the same, I think that I shall most readily cause the practice I recommend to be understood, by describing minutely the treatment of a single variety only, which I received from the Horticultural Society, under the name of 'Lankman's Potato;'" a tall sort raised some years since in Flanders.

"The soil in which I proposed to plant being very shallow, and lying upon a rock, I collected it with a plough into high ridges of four feet wide to give it an artificial depth. A deep furrow was then made along the centre and highest part of each ridge; and in the bottom of this, whole potatoes, the lightest of which did not weigh less than four ounces, were deposited, at only six inches distance from the centre of one to the centre of another. Manure, in the ordinary quantity was then introduced, and mould was added, sufficient to cover the potatoes rather more deeply than is generally done.

"The stems of potatoes, as of other plants, rise perpendicularly under the influence of their unerring guide, gravitation, so long as they continue to be concealed beneath the soil; but as soon as they rise above it, they are to a considerable extent, under the control of another agent, light. Each inclines in whatever direction it receives the greatest quantity of that fluid, and consequently each avoids, and appears to shun, the shade of every contiguous plant. The old tubers being large, and, under the mode of culture recommended, rather deeply buried in the ground, the young plants in the early part of the summer never suffer from want of moisture; and, being abundantly nourished, they soon extend themselves in every direction till they meet those of contiguous rows, which they do not overshadow on account of the width of the intervals.

"The stems being abundantly fed, owing to the size of the old tubers, rise from the ground with great length and luxuriance, support well their foliage, and a larger breadth of this I think, exposed to the light during the whole season, than under any other mode of culture which I have seen; and, as the plants acquire a very large size early in the summer, the tubers, of even very late varieties, arrive at a state of perfect maturity early in the autumn.

"Having found my crops of potatoes to be in the last three years, during which alone I have accurately adopted the mode of culture described above, much greater than they had ever previously been, as well as of excellent quality, I was led to ascertain the amount in weight which an acre of ground, such as I have described—the soil of which was naturally poor and shallow—would produce. A colony of rabbits had, however, in the last year done a good deal of damage, and pheasants had eaten many of the tubers which the

rabbits had exposed to view; but the remaining produce per acre exceeded 539 bushels, of 82 lbs. being allowed in every bushel on account of a very small quantity of earth which adhered to them.

"The preceding experiments were made with a large and productive variety of potato only; but I am inclined to think that I have raised, and shall raise the present year, nearly as large a produce per acre of a very well-known small early variety—the 'ash-leaved kidney potato.' Of this I selected in the present spring the largest tubers which I could cause to be produced in the last year; and I have planted them nearly in contact with each other in the rows, and with intervals, on account of the shortness of their stems, of only two feet between the rows. The plants at present display an unusual degree of strength and vigor of growth, arising from the very large size—for that variety—of the planted tubers; and as large a breadth of foliage is exposed to the light by the small, as could be exposed by a large variety; for I have always found the amount of the produce, under any given circumstance, to be regulated by the extent of foliage which was exposed to light; and I have uniformly found that to obtain crops of potatoes of great weight and excellence, the period of planting should never be later than the beginning of March."

The produce of this small early variety in fact, very considerably exceeded that of the large one first mentioned—being per acre 665 bushels of 82 pounds—and both so far exceeded the ordinary crops which had been previously raised except in very rare cases, that doubts were entertained of the exactness of Mr. Knight's conclusions, and experiments, it will be seen, were made in the garden of the society in order to obtain further evidence.

#### SEED.

It has been ascertained by repeated trials that every variety of the potato, when propagated during a series either from the root, or by the whole tubers, is subject to degenerate: in some, the quality remaining good, after the produce in quantity has become defective, whilst with others, it disappears with the vigor of the plant. In order to obviate this inconvenience, and to preserve those species which are known to be valuable, farmers occasionally raise them from the seed contained in the apples which grow upon the stalk; for which purpose, a few large ripe apples should be chosen from a healthy plant, and be carefully preserved apart, in some dry sand, during the winter.

The seed is then picked out, and usually sown in rich garden ground in the month of April; but it is more expedient to sow it in a hot-bed early in March, to expose the shoots gradually to the open air, and to plant them in a bed of rich earth in the middle of May. In the month of October, the seedlings would produce tubers, the largest of which are to be gathered, and planted out, in the following spring, at a few inches distance from each other. When they rise about two inches above ground, they should be covered with two or three inches of mould, and managed in the same manner as if grown from the old potato.

When arriving at maturity, they should be continually and carefully examined, to discover those

which appear the earliest in coming to perfection; which will be denoted by the decay of the haulm. These should be taken up, and in like manner those of a later growth, but those which show extraordinary vigor should be selected; and the produce of each sort being again sown in the ensuing year, a correct judgment may be formed of the respective properties of each. The process is thus so slow and troublesome, that it takes three years to bring any new variety to maturity, and a fourth before the real properties of the root can be correctly ascertained. The product will also sometimes disappoint the expectations of the grower; for although, generally speaking, the major portion of the crop will be found of the same quantity as the original stock, yet it occasionally fails, and the new varieties are constantly produced, differing in both color, flavor, size, and the periods of ripening. Thus, it appears from an experiment lately made in the garden of the London Horticultural Society, upon twenty-five seedling varieties reared by Mr. Knight, that the estimated produce varied from 1 to upwards of 18 tons per acre; all of different qualities.—The best produced from a single tuber, twenty-seven large and seven small roots, the aggregate weight of which upon an acre of ground it was supposed would equal 17 tons 9 1-2 cwt., and being both large, solid, mealy, well-flavored, and in substance and appearance much resembling the white yam, has been named by the Society, after Mr. Knight's country seat, the "Downton Yam Potato."

#### SETS AND TUBERS.

We have already stated, that in the common course of field-husbandry, potatoes are invariably planted for a crop, either by depositing the entire root, or cuttings from it, called "sets." No objection appears indeed to have been commonly entertained against the planting of the whole root, or "tuber,"—except on the score of economy, though probably no other advantage will be thereby gained, for every tuber contains many heads, or "eyes,"—from each of which a shoot will spring, and by sowing these separately, or in cuttings containing two or more together, a saving is made in the quantity, but an extraordinary opinion is entertained regarding the best method of performing this operation.

Among numberless experiments which have been made with a view to compare the produce of plantations of different sizes of whole tubers, and sets from different sizes of cuttings, those of entire potatoes reported to the Bath Society were generally stated to be superior. Dr. Anderson found that the crop was in some measure proportionate to the weights of the sets; and that it was more profitable to plant small potatoes than small cuttings. Others, however, found that the difference in acreable produce, between large and small, cut or uncut potatoes for sets, was quite immaterial; but that the saving in the quantity sown, was so much in favor of the cuttings as to require only twenty bushels per acre. Yet, according to a report made to the Dublin Society of Agriculture, it was stated, on comparison with the sets cut from reasonably large and small tubers, that the produce in favor of the former was as 24 to 64; and another well informed gentleman states, "he has uniformly found in all his

experience, that large sets of potatoes made a more productive return than small ones. And upon trial, both in garden and field, he has repeatedly found that planting whole potatoes, even though large, very much increases the crop. In this way, however, they require to be planted thinner, as the stems, being stronger and more luxuriant, occupy more space."

To set this point at rest, five plots of ground of equal size, and as nearly as possible of equal quality, were also lately selected by the London Horticultural Society for the growth of five different varieties: one-half of which being planted with whole tubers, and the other with sets containing but one eye each; and, being placed equal distances—eighteen inches apart—the result was as follows:—

Species.	Weight when taken up.	
	Whole tubers. tons.cwt.lb.	Single eyes. tons.cwt.lb.
Early many,	17 10 4	18 19 82
Shaw's,	20 15 26	20 0 4
Red-nosed kidney	18 7 71	17 12 49
Pink-eyed scotch,	22 15 83	20 2 7
Champion,	23 14 0	24 0 18

The whole tubers appeared above ground, in each instance, three or four days earlier than the sets, and the haulm became somewhat longer—but the experiments show that, although the total amount thus estimated to have been obtained is—

From whole tubers,	tons.cwt.lb.
— single eyes,	113 2 17
	111 8 54

thus giving an apparent difference in five acres of about two tons, yet it was hardly more than the difference between the weight of the tubers and the sets originally planted.

Those and other trials, indeed, afford presumptive evidence that sets cut from full grown, healthy tubers, are as productive as the whole root; for although it is recorded as the opinion of the President of the Society, founded upon a variety of experiments carried on during a long series of years, "that the earliest crops of potatoes, and those most profitable to the grower, will in most soils and seasons be obtained from tubers of considerable weight, and will be found less subject to decay in wet and cold springs; he, however, thinks it extremely probable that, when the soil is very dry, so as to preclude all grounds of fear of the cuttings decaying, more regular and better rows and plants might be obtained from single eyes placed at short distances, with a moderately large portion of matter of the tuber, than the whole tuber."

It may also be observed that the eyes or heads, which appear like spots upon the skin of the potato—are of different kinds; those at one end being more prolific than the other; yet, when planted in sets, some farmers cut off both ends, only making use of the part, in the middle, while others cut it longitudinally—from "nose to tail," and set both halves indiscriminately; and many scoop out the eyes and plant them singly. The stems which spring from that end of the potato into which the fibre which connected it with the mother plant, and from which the potato itself is grown, germinate but feebly and do not attain the same size as those which are found upon the

other end, which may be seen by looking at potatoes in the spring, when they begin to bud:—those which spring from the top end, having far greater vigor and luxuriances than those which spring from the root end.

It is indeed a point which deserves very serious attention; and as the other portions of the potato can always be used for other purposes, it should never be neglected. Instead, however, of sowing single eyes, we should rather recommend the use of the entire cluster of buds which will be found on the top-end, or nose of the tuber.

*Library of Useful Knowledge.*

#### CHESTER CO. SILK COMPANY.

At an annual meeting of the stockholders of the Chester Co. (Pa.) Silk Company, held on Saturday, the 21st inst. SAMSON BABB was appointed Chairman, and WM. P. TOWNSEND, Secretary.

The following Report of the situation and condition of the Company was laid before the meeting by the Directors:

#### REPORT.

The Directors of the Chester County Silk Company, in laying before the stockholders, their first annual report, take great pleasure in stating that it bids fair to become a pioneer in the promotion of a branch of industry, that ere long, will be a source of great national importance.—The proper spirit to promote the growth and manufacture of silk in our own country is awakened, and it is only necessary that the impulse it has received, should be continued for a short period, to give it an onward course, that will then require but little, if any extrinsic aid. At present, however, it needs the fostering care of individuals of enterprise and capital.

Notwithstanding the lateness of the season, when the board were enabled to begin operations, they have pressed forward with as much rapidity as the nature of the business, together with the amount of capital subscribed would allow. Late in the Spring, when five thousand five hundred dollars of capital were subscribed, a lot containing about twelve acres of land, on the north-eastern side of the Borough of West Chester, was purchased at a reasonable price. As soon as the season would allow, a portion of the ground was prepared, and eleven hundred and eighty-eight white mulberry trees of several years' growth, were planted, the most of which are growing, and will soon become valuable standard trees. There were also three hundred of the *morus multicaulis*, or Chinese mulberry trees, which flourished well, and produced a large amount of foliage. In addition to these, at about the same time, one pound of white mulberry seed, was sown in drills, from which it is probable, there will be several thousand trees for the use of the company. That a portion of the farm which was not ploughed, yielded by estimate from ten to twelve tons of hay, which is still unsold.

The whole lot, except that part bounded by the Rail Road, has been surrounded by a hedge of Virginia thorn, which has every appearance of becoming, at no very distant period, a valuable protection to the grounds. Late in the season, one thousand more of the Chinese mulber-

ry trees were obtained at a fair price, for the purpose of setting out at an early day in the ensuing Spring. It is believed, from the cuttings they will afford, together with those obtained from the trees of the same species planted last spring, there may be several thousand trees with good roots, by the close of the coming season.

Two instalments, one of five and the other of six dollars, upon each share of stock subscribed, have been called in, which have not been quite sufficient, after paying for the land, to liquidate the current expenses of the season. The expenses unpaid, together with others that must soon accrue, in prosecuting the concerns of the company, will make an accession to the funds necessary at an early day.

Upon leaves procured from a few white mulberry trees in the neighborhood, several thousand silk worms were fed, chiefly for the purpose of obtaining practical information; and though the season was very unfavorable, the result was as satisfactory as could be looked for. A portion only of the silk obtained, has been reeled, and in consequence thereof, has not yet been manufactured as had been intended, before the annual meeting of the stockholders.

The board wish the attention of the stockholders and others drawn to the fact, that the law under which the company is incorporated, is as favorable as could be desired; there being no restrictions tending to trammel the concerns of the institution while operating within its legitimate sphere. Opportunity still exists for those that are willing to embark in the enterprise upon the same terms as original subscribers.

From numerous facts collected by the President of the company in a late tour through some of the eastern states principally with this view, and from other sources of information, the board have no hesitation in saying that the profits arising from the growth and manufacture of silk, under proper care, far exceed those ordinarily realized from agricultural pursuits, and that not only companies, but individuals may safely engage in the business. Two reasons present themselves why companies can operate more advantageously than individuals. First, from having a capital sufficient at the start to procure land, buildings, trees, machinery, &c. Second, by being able to concentrate in a large establishment the experience, talents, and service of operatives and others, acquainted with the various processes necessary in such establishments. The broader the scale upon which operations are commenced, if judiciously managed, the earlier will profits be realized. While we would recommend individuals on their own account to embark in the business, we are sufficiently aware that there is generally a great lack of the necessary knowledge on the subject of cultivating the mulberry, raising the silk worm and manufacturing the silk; and that it is through the medium of well organized companies, that correct and useful information is to be expected in the early periods of this important branch of industry.

It is the opinion of the board that the stock should be augmented as early as practicable, in order to enable the company to enter into the business upon a much broader scale than the



present amount of capital justifies, and that the books should be opened at an early day for new subscriptions.

The foregoing report having been read, it was on motion

Resolved, That the Report of the Directors of the past year, be accepted—ordered to be published; and that the thanks of the stockholders are respectfully tendered to the Board for the zeal and fidelity with which they have performed their trust. The meeting then proceeded to the election of seven directors to serve the ensuing year, when upon examining the ballots it appeared that

Dr. Isaac Thomas, Jonathan Valentine, Philip P. Sharpless, John Rutter, David Townsend, Charles Downing and Caleb Brinton were duly elected.

SAMSON BABB, Chairman.

WM. P. TOWNSEND, Secretary.

West Chester, Jan. 25, 1837.

[Village Record.]

#### GRAPES.

Mr. Harrison, of Newark, New Jersey, has discovered a method of preserving the common grapes of our vines, the Powell and Catawba grapes, for many months, with all the freshness of flavor, taste and appearance, that they had the moment they were taken from the vine. The experiment has been fairly tested; in the fall of 1835, Mr. Josiah Dow, of Brooklyn, Long Island, who has a most extensive vineyard, adopted Mr. Harrison's plan, and as a consequence, had the luxury of fresh grapes upon his table all winter, and last fall he repeated the trial, no longer an experiment, and finds the same happy result.

We have now before us a bunch of Catawba grapes, which Mr. Harrison preserved last September, and they taste as well as they would have tasted directly from the vine. There are immense quantities of grapes of the richest kinds raised in and near Philadelphia, as the exhibition last fall at the Franklin Institute fully testified; and the quantities would undoubtedly be greatly increased, if a mode of preserving the fruit for the winter was generally known. It seems to us that the discovery of Mr. Harrison will meet the wishes of the grape growers and grape eaters, and that hereafter we may expect to see native grapes placed on our dinner and supper tables, during the fall and winter months.

Mr. Harrison sells rights to prepare the grapes, a process requiring no labor, at \$5 for a family, or he will sell the rights of a city or district, and he may be addressed by letter, as follows:—Charles A. Harrison, Mulberry street, Newark, New Jersey.

But Mr. Harrison will undoubtedly visit Philadelphia next fall, in the grape season, when persons are more in the mood of discussing such matters, and when the rich clusters tempt the wish that the luscious fruit might be enjoyed the year round.—U. S. Gazette.

To the Editor of the Chronicle—

Sir—Under the present scarcity and high prices of horse-feed and provender of all kinds, I think it the duty of every farmer to render his aid in weathering the winter to the best advantage.

When grain was cheap and plenty, I usually gave my team of six horses three pecks of chopped rye, with a sufficient quantity of cut straw and a good rack of hay. If the chop was not ground fine and well wetted and mixed with the straw, they would often root it about in the trough until it became dry, shake off the chop to the bottom, eat it and throw the straw out of the trough. As "necessity is the mother of invention," I conceived a plan of preventing such a waste of feed: Instead of giving them three pecks of raw chop with the straw as usual, I now, (as rye is scarce and dear) in order to fill up and save my hay, boil six or seven gallons of water, pour it hot into a tub upon one heaping peck of chop, making a kind of thin rye paste, or loblolly, to 9 bushels of straw, and mix it up hot. It softens, sweetens, and sticks so tight to the straw that they cannot shake it off, and will eat it all as clean as they usually did when they had three pecks, and I think the experiment well worthy of a trial by all farmers, carters, draymen, &c. A FARMER.

**Beet root Potash.**—In addition to the sugar and alcohol produced from the Beet, they now, from the residuum, manufacture potash from the Beet, which has been used in the process of making sugar.—This discovery was made by M. Dubrunfaut, and threatens to rival the product of the American forests. Thus, supposing that 42,000 of pounds of sugar is made, from the residuum can be manufactured 6,000,000 lbs. of saline matter, comparable with the best potash of commerce.—Buf. Pat.

**Interesting to Horses.**—"A Friend to horses," in the Pittsburgh Gazette, cautions owners of horses against putting cold bridle bits into the mouth of the horse when the weather is much below the freezing point; by doing so the bit touches the tongue or lips; the skin will come off, as if burnt with a hot iron. Hence the sore tongue in horses so often complained of and suffered. This fact should be made known, and the practice of warming the bit observed in all northern latitudes, where the thermometer ranges between zero and the freezing temperature.

#### CLAREMONT NURSERY,

3 Miles East of Baltimore.

ROBERT SINCLAIR, Senr.



Proprietor, hereby informs his friends and the public that he expects the weather will be suitable to commence filling orders about the middle of the present month.

And owing to the winter setting in so unusually early, it is believed prevented many persons from ordering who intended to have done so, and even many orders that did come, had to remain unfilled until the spring, consequently his stock remains good for most articles as advertised last fall—particularly Apple, Peach, Plum, Quince, English Raspberry, Strawberry, Gooseberry, Currant, Grape Vines, three years old, and Cuttings of the same, a few hundred Morus Multicaulis, and other Mulberry Trees, Ornamental shade Trees, many kinds, and several of them of large size, Balsam Fir, or Balm of Gilead, and other evergreens, and a superb collection of Garden and China Roses, and other beautiful Flowering Shrubs, Honey Suckles, Vines and Creepers, Rhubarb for tart, &c. See printed and priced catalogues, to be had of the proprietor, gratis, or of R. S. jr. in Light street.

Also will be delivered to customers, strong thrifty pot. ted Plants; about the middle of May, a splendid assort.

ment of double Dahlias, consisting of about one hundred varieties, carefully selected from among the best and latest importations. Printed catalogues will be furnished as above.

A few more pair white Turkeys, and 2 male Pheasants. Feb 14

#### GARDEN SEED.

THE subscriber has just received his general supply of fresh Garden Seeds from the Messrs. Landreth's of Philadelphia—those for retailing bearing their label and warranted. The Messrs. Landreth's grow the most of the seeds they vend, and theirs is the oldest and probably the most extensive establishment in this country, and their seeds have no rival as to quality. Orders from country dealers will be supplied at short notice. Catalogues furnished gratis.

JONATHAN S. EASTMAN.

Feb. 14

#### FARMER'S REPOSITORY

No. 36 W. Pratt-street, Baltimore, Jan. 25.

THE proprietor avails himself again of the commencement of a New Year, to express his grateful thanks to his numerous friends and customers for their kind and liberal support of his Agricultural Establishment, and is happy to say that his ceaseless exertions to accommodate the public, have not been without a corresponding encouragement from them, and with his present Improvements and Machinery, he is able to manufacture his Agricultural Implements much better than formerly, and with greater facility, and hopes to merit continued patronage. He now presents to the public an article new in its construction, for grinding corn and cob for feeding horses and stock. To those who approve this mode of feeding, this machine is worthy their attention. Also, Corn Shellers to be worked by hand or horse-power. He has a variety of Straw Cutters; but his own patented Cylindrical Straw Cutter is not surpassed by any other implement of the kind in existence; he has recently made some improvements in their construction, which adds to their cost, and for which he has been obliged to add a trifling advance on the price of the small size:—his prices for them being as follows, viz:

11 inch Revolving bottoms \$30, with extra pair of knives,	\$33
11 " Permanent Bottom 28, do do do	31
13 " " " 43, do do do	48
13 " Revolving Bottom 45, do do do	50
15 " " " 50, do do do	56
20 " Large size fitted for horse-power 80, do do	90

His variety of ploughs embraces almost every description and size that are worthy of notice, from a small seed Plough to the large rail road Plough—Gideon Davis' Improved Ploughs in all their variety, with cast and wrought shares; these castings are now made on his own premises, of the best stock and with special care; a supply of them always on hand to sell separate from the ploughs when required. Ox Scrapers for levelling hills, &c.; common and patent Wheat Fans; Fox & Norland's spring concave Thrashing Machines, large and small size, and portable horse powers for the latter; also one of Z. Booth's 2 horse Thrashing Machines and stationary horse power for the same; Brown's vertical patent Wool Spinners, and Watson's patent Washing Machine, both very simple and useful machines for families; Harrows; double and single corn and tobacco Cultivators; superior grain Cradles; and a great variety of other farming implements of a prime quality; and all on reasonable terms, at wholesale and retail.

Likewise in store—Orchard Grass, Timothy, and Herds Grass seed of superior quality.

JONATHAN S. EASTMAN.

#### MORUS MULTICAULIS TREES.

THE SUBSCRIBER has for sale, 4,000 Morus Multicaulis trees, one and two years old, which he will sell at \$25 per hundred.

EDWARD P. ROBERTS,

Balt., Dec. 13.

Editor Farmer & Gardener.

#### CONTENTS OF THIS NUMBER.

Notice of the Beet culture—the cultivation of Silk—Foreign Wheat—Observations by R. Sinclair on transplanting and the culture of Fruit Trees—Notice of Niles' Register—remedy for whooping cough—on the Beet culture—Gypsum in Ohio—Essay on the Potato—Chester Co. Silk Company—preserving Grapes—to save home feed—beet root potash—interesting caution relative to horses—prices current—advertisements.

